ABSTRACT

A data storage system connectable to a host unit which issues data read/write requests to the data storage system, and which includes a plurality of disc units, and a controller connected to the disc units. A fault can occur in any of the disc units. The disc units store data in a plurality of data groups and error correcting data corresponding to each of the data groups. The controller performs processing of reconstructing data stored in any of the disc units in which a fault has occurred based on all other data belonging to any of the data groups to which the data to be reconstructed belongs and error correcting data corresponding to any of the data groups to which the data to be reconstructed belongs, and performs processing of data read/write requests from the host unit. The controller is operable in a first mode wherein the processing of reconstructing data has priority over the processing of data read/write requests, and a second mode wherein the processing of data read/write requests has priority over the processing of reconstructing data. The controller may determine whether to operate in the first mode or the second mode based on an urgency of data reconstruction, or may determine whether to operate in the first mode or the second mode in order to complete data reconstruction within a fixed time.